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AD872535
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AUTHORITY
OAG D/A ltr, 29 Apr 1980

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DEPARTMENT OF THE ARMY  
OFFICE OF THE ADJUTANT GENERAL  
WASHINGTON, D.C. 20310

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IN REPLY REFER TO

DA FORM (22 Jul 70)

FOR OT UT 702065

28 July 1970

SUBJECT: Operational Report - Lessons Learned, Headquarters, 36th Engineer Battalion, Period Ending 30 April 1970

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2. Information contained in this report is provided to insure appropriate benefits in the future from lessons learned during current operations and may be adapted for use in developing training material.

3. ORDER OF THE SECRETARY OF THE ARMY:

*Kenneth G. Wickham*

KENNETH G. WICKHAM  
Major General, USA  
The Adjutant General

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36th Engineer Battalion



DEPARTMENT OF THE ARMY  
HEADQUARTERS 36TH ENGINEER BATTALION (CONST)  
APO San Francisco 96357

EGFE-OP

15 May 1970

SUBJECT: Operational Report-Lessons Learned (RCS CSFOR R1) for Quarterly  
Period Ending 30 April 1970

Commander-in-Chief, United States Army, Pacific, ATTN: GPOP-OT, APO 96588  
Commanding General, United States Army, Vietnam-ATTN: EWEGC-0H, APO 96307  
Commanding Officer, 20th Engineer Brigade, Vietnam, ATTN: AVBI-OS, APO 96491  
Commanding Officer, 34th Engineer Group, Vietnam ATTN: EGF-OP APO 96320

1. SECTION I, OPERATIONS - Significant Activities

a. From 1 February thru 30 April, the 36th Engineer Battalion's construction effort was directed toward two major projects which were the restoration of National Highway 4 from My Thuan to Ba Cang in Vinh Long Province and the restoration of Interprovincial Highway LTL-7A from Vinh Long to Ap An Dien in Vinh Long Province. The other projects accomplished were continuation of the upgrade of MACV Advisory Facilities, Land Clearing, and the construction of a 20,000 square yard parking apron at Vinh Long Army Airfield.

b. During the reporting period, 30 percent of the asphaltic concrete paving of National Highway 4 was completed. A total of 30 kilometers of double lane (24 feet) single surface asphaltic concrete was laid on National Highway 4.

c. During the period, work continued on Interprovincial Highway, LTL-7A with the widening of the existing 6 meter roadway to a 8 meter road with a 7 meter travel way. The first bridge (Bridge #1 180' foot length) was completed with work in progress on two other bridges (Bridge #4 and Bridge #5). Presently progress is 49 percent complete on the 180 foot bridge #4 and 24 percent complete on the 220 foot bridge #5. The progress of the road includes the completion of 23 kilometers of clearing and grubbing, 24 kilometers/57,270 cubic yards of subgrade, 18 kilometers/16,140 cubic yards of subbase, 8 kilometers/9,000 cubic yards of 3"(-) rock base course, and 8 kilometers/53,500 square yards of double surface treatment. The total project is 34 percent complete.

d. During the period, the 36th Engineer Battalion was directed to construct a 20,000 square yard aircraft maintenance hardstand at Vinh Long Army Airfield composed of compacted sand fill overlaid with an 8 inch lift of sand cement, sealed with peneprime and surfaced with M8A1 matting. At the end of the period, 21,242 cubic yards of sand and 3,560 tons of sand/cement had been placed.

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15 May 1970

UNIT: Operational Report-Lessons Learned (RCS GEFOR PL) for Quarterly  
Period Ending 30 April 1970

e. During the period, the Battalion continued operation of the Vinh Long rock off-loading facility and began rock off-loading operations at Ap Nuoc Xay. Monthly off-loading production rates at Vinh Long were 24,900 tons in February, 31,730 tons in March, and 28,685 tons of rock in April. As of 30 April 1970, a total of 343,817 tons has been off-loaded since the site's inception in January 1969. 989 tons has been off-loaded at Ap Nuoc Xay since the site's inception in April 1970.

f. During the period, the Battalion's 80-120 ton per hour Barber Greene 848 asphalt plant has produced 35,000 tons of asphalt which was placed on National Highway QL-4.

g. During the period, the Battalion Personnel Section inprocessed 367 personnel as replacements and outprocessed 328 personnel for reassignment or separation.

## 2. SECTION I, OPERATIONS - Organization

### a. Organic Units

- (1) HHC, 36th Engineer Battalion (Const)
- (2) A Co, 36th Engineer Battalion (Const)
- (3) B Co, 36th Engineer Battalion (Const)
- (4) C Co, 36th Engineer Battalion (Const)
- (5) D Co, 36th Engineer Battalion (Const)

### b. Operational Control

- (1) First Platoon, 523rd Engineer Company (PC)
- (2) Second Platoon, 523rd Engineer Company (PC)

## 3. SECTION II, LESSONS LEARNED - Commander's Observations, Evaluation and Recommendations.

### a. Personnel: None

### b. Operations:

#### (1) Asphalt Paving

(a) Observation: Difficulty was encountered in obtaining well graded longitudinal joints in asphaltic concrete pavements.

(b) Evaluation: When paving operations started all of the asphaltic concrete overlapped over the existing paved lane was shaped and pushed back on the asphalt being laid to form the joint. It was found that the asphalt overlapped contained more large aggregate than the remainder of the mix and caused a course mix at the joint. This excess of course material was caused primarily through segregation at end of the screw on the paver. A smooth,

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15 May 1970

Subject: Operational Report-Lessons Learned (RCS CSFOR 21) for Quarterly Period Ending 30 April 1970

well graded joint was obtained by raking out the large aggregate from the asphalt overlapped prior to pushing asphalt back on the new pavement. Large aggregate was raked out onto existing lane, piled in piles, and shoveled off the shoulder of the road. The removal of the course material resulted in smooth, well graded longitudinal joints.

(c) Recommendation: That method described above be utilized to obtain smooth joints between asphaltic concrete pavement lanes.

## (2) Asphalt Plant

(a) Observation: A large amount of rock is discharged from the gradation control unit of the Asphalt Plant and required a front loader almost full time to remove the discharge rock. In addition a tremendous dust problem was created by the rock and fines falling on the plant pad.

(b) Evaluation: To obtain sufficient 3/8" rock and fines to make a specification asphalt mix required putting an excess quantity of 3/4"(-) rock into the cold bins. This resulted in considerable over flow of 1/2" rock through the over flow shoots and required constant removal of the over flow piles which were dropped on the concrete plant pad. This problem was solved by discharging the over flow shoots into a bin which fed a belt conveyor. The conveyor moved the material back near the aggregate stockpile and eliminated the use of the front loader. Considerable dust was also eliminated in the pad area.

(c) Recommendation: If over flow from a gradation control unit creates a problem of material removal, installation of a conveyor will eliminate the problem.

## (3) The Movement of Deadlined 290 Tractors

(a) Observation: Considerable maintenance time was wasted on the waiting for the availability of low-boys to move deadlined 290's to maintenance shops.

(b) Evaluation: By pinning the articulators of the deadlined 290 tractor and then chaining an operational 290's blade to the deadlined 290's blade, it can then be towed to the maintenance shop.

(c) Recommendation: Above method be utilized to move deadlined 290 tractors short distances if tractor is not deadlined for any wheel component.

## (4) Disposal of Asphalt Barrel Tops and Rings

(a) Observation: Disposal of asphalt lids and rings were a problem during dedrumming operations.

(b) Evaluation: During the normal operation of the asphalt plant, the dedrumming crew has little or no time to police the discarded barrel tops.

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SUBJECT: Operational Report-Lessons Learned for Quarterly Period Ending  
30 April 1970 RCS CSFOR (R2) (U)

At the end of the shift, the crew had to clean up the pile creating a loss of manpower that could be used elsewhere. The melted asphalt had to be cleaned up each day to eliminate fire hazard.

(c) Recommendation: An unserviceable conex makes an excellent container to load the barrel tops and rings from 55-gallon drums. The top half is cut off and the door section welded. This process produces a strong container that can be easily loaded and dumped with a forklift. The residue asphalt from the lids does not leak out of the conex.

(5) Covers for Asphalt Trucks

(a) Observation: Asphalt was cooling rapidly while being transported from the asphalt plant to the paving train.

(b) Evaluation: To eliminate this heat loss covers were made from membrane surfacing that is found in airfield matting sets. Four by fours are nailed to each end of the membrane with one end being attached to two by four on the headache board of the truck.

(c) Recommendation: This cover reduces the heat transfer and creates a light weight cover that is strong, yet easy for the driver to handle.

(6) Locating Road Center Line During Night Paving Operations

(a) Observation: Difficulty was encountered in finding the center line during night paving operations.

(b) Evaluation: The night paving crews had difficulty in locating center line in front of the paving train. Center line was marked during the day with a red and white circle painted around a nail. Traffic during the day largely eliminated the paint making the nail extremely difficult to find. Tops of soft drink cans were removed and placed under the nails. This can lid can be found easily at night.

(c) Recommendation: Locating road center line can easily be accomplished at night if above method is utilized.

- (d) Training: None
- (e) Logistics: None
- (f) Maintenance: None
- (g) Supply: None
- (h) Medical: None

EARLY J. RUSH III  
LTC, CR  
Commanding

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SGT-OF (20 May 70) 1st Ind

SUBJECT: Operational Report of 36th Engineer Battalion for Period Ending  
30 April 1970, RAS CSFOR-65 (R2)

TO: COMMANDERS 34TH ENGINEER GROUP (CONST), APO 96320 20 May 1970

CC: Assistant Chief of Staff for Force Development, Department of the Army,  
Washington, D.C. 20310  
Commanding Officer, 20th Engineer Brigade, ATTN: AVBI-03, APO 96491


1. The ORLL submitted by the 36th Engineer Battalion has been reviewed and is considered comprehensive and of value for documentation for the reporting unit's activities and lessons learned.

2. Two items which should have been included in this report are as follows:

a. LTC Early J Rush III assumed command of the 36th Engineer Battalion on 8 March 1970.

b. Company B relocated to Ap Nuoc Kay from Vinh Long on 9 March 1970.

FOR THE COMMANDER:

  
IVAN L. MYERS  
CST, CE  
Adjutant

CF:  
CO, 36th Engr Bn

AVBI-OS (15 May 70) 2nd Ind  
SUBJECT: Operational Report - Lessons Learned of 36th Engineer  
Battalion (Construction) for Period Ending 30 April 1970,  
RCS CSPOR-65 (R2)

DA, HEADQUARTERS, 20TH ENGINEER BRIGADE, APO 96491 13 JUN 1970

TO: Commanding General, United States Army Vietnam, ATTN: AVHGC-DST,  
APO 96375

1. Submitted in accordance with USARV Regulation 525-15, dated 13  
April 1968.

2. This headquarters concurs with the submitted report with the  
following comments:

a. Section II, paragraph b(2), page 3: Concur: This is a good  
solution for the problem. Steps should be taken to improve the gra-  
dation of the rock at Vung Tau which, when within specifications,  
would eliminate this problem.

b. Section II, paragraph b(3), page 3: Concur: This solution is  
good as long as the towing is held under one mile. The transmission  
does not receive adequate lubrication and can be damaged by excessive  
towing.

FOR THE COMMANDER:

*D L Mc Bride*

D. L. MC BRIDE  
1LT, CE  
Assistant Adjutant

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CO, 36th Engr Bn

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AVHGC-DST (15 May 70) 3d Ind  
SUBJECT: Operational Report-Lessons Learned (RCS CSFOR R1) for Quarterly  
Period Ending 30 April 1970


Headquarters, United States Army Vietnam, APO San Francisco 96375 28 JUN 1970

TO: Commander in Chief, United States Army Pacific, ATTN: GPOP-DT,  
APO 96558

This headquarters has reviewed the Operational Report-Lessons Learned  
for the quarterly period ending 30 April 1970 from Headquarters, 36th  
Engineer Battalion and concurs with comments of indorsing headquarters.

FOR THE COMMANDER:

Cy furn:  
20th Engr Bde  
36th Engr Bn

  
C. E. MICHELS  
MAJ, AGC  
Assistant Adjutant General

GPOP-DT (15 May 70) 4th Ind

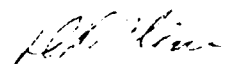
SUBJECT: Operational Report of HQ, 36th Engineer Battalion (Const) for  
Period Ending 30 April 1970, RCS CSFOR-65 (R2)

HQ, US Army, Pacific, APO San Francisco 96558 17 JUL 70

TO: Assistant Chief of Staff for Force Development, Department of the  
Army, Washington, D. C. 20310

This headquarters concurs in subject report as indorsed.

FOR THE COMMANDER IN CHIEF:



J.D. CLINE  
LT. AGC  
1st AG

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Security Classification

DOCUMENT CONTROL DATA - R & D		
(Security classification of title, body of abstract and indexing annotation must be entered when the overall report is classified)		
1. ORIGINATING ACTIVITY (Corporate author)		2a. REPORT SECURITY CLASSIFICATION
HQ, OACSFOR, DA, Washington, D.C. 20310		FOR OFFICIAL USE ONLY
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3. REPORT TITLE		
Operational Report - Lessons Learned, HQ, 36th Engineer Battalion		
4. DESCRIPTIVE NOTES (Type of report and inclusive dates)		
Experiences of unit engaged in counterinsurgency operations, 1 Feb 70 to 30 Apr 70.		
5. AUTHOR(S) (First name, middle initial, last name)		
CO, 36th Engineer Battalion		
6. REPORT DATE	7a. TOTAL NO. OF PAGES	7b. NO. OF REFS
15 May 1970	11	
8a. CONTRACT OR GRANT NO.	9a. ORIGINATOR'S REPORT NUMBER(S)	
b. PROJECT NO N/A	702065	
c.	9b. OTHER REPORT NO(S) (Any other numbers that may be assigned this report)	
d.		
10. DISTRIBUTION STATEMENT		
11. SUPPLEMENTARY NOTES		12. SPONSORING MILITARY ACTIVITY
N/A		OACSFOR, DA, Washington, D.C. 20310
13. ABSTRACT		